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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,890	08/11/2006	Raymond Brian Brosseuk	00878.0051USWO	6847
23552	7590	12/11/2007	EXAMINER	
MERCHANT & GOULD PC			RODRIGUEZ, JOSEPH C	
P.O. BOX 2903			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402-0903			3653	
MAIL DATE		DELIVERY MODE		
12/11/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/551,890	BROSSEUK ET AL.
	Examiner	Art Unit
	Joseph C. Rodriguez	3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 October 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/11/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of a groove or the respective troughs must be shown or the feature(s) canceled from claims 16-20. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Claim Objections

The claims are objected to as the form of claims 1-22 is improper. Where a claim sets forth a plurality of elements or steps, as in the instant claims, each element or step should be separated by a line indentation. See MPEP 608.01(m) and 37 CFR 1.75(i).

Further, dependent claims should start "The".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Here, the correlation between the claimed method steps and the functioning of the apparatus taught in the specification is unclear. Moreover, the specification appears inconsistent, thus contributing to improper enablement of the claims. For instance, when discussing the use of the apparatus (Spec. p. 18 et seq.), the material flow directions appear to conflict (i.e., Applicant teaches material moving downwardly along

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the slope of the belt and then downwardly off of the belt in a direction that appears transverse to the original "downwardly" direction and then teaches that heavy materials will travel to exits 18.2 and 18.3 in what appears as opposite directions). Thus, the operation of the apparatus is unclear and Applicant has not properly enabled the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the concentration step". There is insufficient antecedent basis for this limitation in the claim as Applicant has previously defined two concentration steps.

Claim 6 recites the limitation "the accumulation zone". There is insufficient antecedent basis for this limitation in the claim.

Claims 7 and 8 recite the limitation "the discharge zone". There is insufficient antecedent basis for this limitation in these claims.

Method claims 1-9 are also indefinite as the scope of these claims is unclear in light of the inconsistent specification cited above.

Regarding apparatus claims 17-20, the claim language "as applicable" and "suitable" render the claims indefinite as it is unclear how this language modifies the claim features.

Examiner requests clarification and in the interim has interpreted the claims as set forth below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 10, 11, 13-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Blake (US 964,083).

Blake (Fig. 1-2) teaches a heavy particle separation apparatus, including a tiltable transverse belt (G) concavely shaped in its central area, and including a spiral rib (Fig. 2; p. 1 teaching riffles or spiral grooves) having any suitable pitch provided on the belt outer surface, the rib being adapted to urge material upwardly along the transverse belt,

a material feeder means (chutes L, K) provided above the transverse belt, a water spray system (M) also provided above the transverse belt, a plurality of idler rollers (H), and respective troughs (Fig. 1, near N and near cup behind apparatus). Further, Applicant is respectfully reminded that claim language

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consisting of functional language and/or intended use phrasing is given little, if any, patentable weight as the apparatus must merely be capable of functioning, or being used, as claimed. See MPEP 2112.02, 2114. Here, the apparatus cited above is certainly capable of having idler rolls being adjustable in a vertical direction to provide any desired profile for the conveyor belt and providing an even differential feed of material to the transversely operated transverse belt.

Regarding method claims 1, 5 and 22, these claims are regarded as anticipated in the normal operation of the device cited above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 6-9, 12, 17-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blake in view of Rohr et al. ("Rohr") (US 6,059,120), Newman et al. ("Newman") (US 4,962,858)

Blake as set forth above teaches all that is claimed except for expressly teaching a preliminary separation stage including the steps of adding water to the feed material, scrubbing, size classification and transportation to the primary separation stage and a

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differential transportation step designed to separate heavy, medium and light particles before introduction to the primary separation stage and a secondary separation stage including a suitable sluice box to separate fine heavy material including retaining or retention modules mounted on a suitable conveyer means and being removable in continuous fashion for collection of heavy particles and varying the rib/groove height or depth. These features, however, are well-known in the sorting arts. For instance, Rohr teaches a preliminary separation stage as claimed (Fig. 1-4, 6, 8 near chute 4; col. 3). Newman teaches a secondary separation stage including retention modules (Fig. 2, near 23). Further, it would be obvious to one with ordinary skill in the art to modify the base reference with these prior art teachings to arrive at the claimed invention. The rationale for this obviousness determination can be found from an analysis of the prior art teachings. Here, the modification to arrive at the claimed invention would merely involve the substitution/addition of well-known elements with no change in their respective functions (i.e., feeding chute). Moreover, the use of prior art elements according to their functions is a predictable variation that would yield predictable results, and thus cannot be regarded as a non-obvious modification when the modification is already commonly implemented in the prior art. Further, the use of a second separation stage provides the common-sense benefit of a finer separation. Further, the mere adjustment of well known features, such as groove or idler roller height or pre-classification to a specific size, are regarded as obvious modifications based on the design incentives and/or economic considerations involved in this type of subject matter. Further, the prior art discussed and cited demonstrates the level of

sophistication of one with ordinary skill in the art and that these modifications would be well within this skill level. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Blake for the reasons set forth above.

Conclusion

Any references not explicitly discussed above but made of record are considered relevant to the prosecution of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Joseph C Rodriguez** whose telephone number is **571-272-6942** (M-F, 9 am – 6 pm, EST). The Supervisory Examiner is Patrick Mackey, **571-272-6916**. The **Official** fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

The examiner's **UNOFFICIAL Personal fax number** is **571-273-6942**.

Further, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see
http://pair-direct.uspto.gov

Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at **866-217-9197** (Toll Free).

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Signed by Examiner /Joseph Rodriguez/

Jcr

December 4, 2007

A handwritten signature in black ink, appearing to read "Joseph Rodriguez", is written over a diagonal line.